

# **EXHIBIT 1**

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION

NUMATICS, INC.,

Plaintiff,

Case Number 13-11049

Honorable David M. Lawson

v.

BALLUFF, INC. and H.H. BARNUM  
COMPANY,

Defendants.

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**OPINION AND ORDER ON PARTIES' MOTIONS TO EXCLUDE  
CERTAIN EXPERT WITNESS TESTIMONY**

In this patent infringement case, the parties have filed motions for orders to preclude various liability and damage expert witnesses from testifying. The Court held a hearing on all of the motions on December 3, 2014. For the reasons that follow, the Court will deny the defendants' motion to exclude the testimony of Michael J. Lasinski and Phillip O'Keefe, and grant the plaintiff's motions to exclude certain portions of the testimony of Michael Justice and Daniel M. McGavock.

I.

Plaintiff Numatics, Inc. alleges that defendants Balluff, Inc. and H.H. Barnum Company infringed several claims in U.S. Patent No. 7,967,646 ('646 patent), which describes a modular electrical fieldbus system. The system is intended to control the opening and closing of hydraulic and pneumatic valves. The invention incorporates interchangeable input-output (I/O) modules that can be interconnected to maintain communications to the bus system and mounted close to the valve manifolds, and can be adjusted by and report information on an alphanumeric display.

The plaintiff hired accountant Michael Lasinski as a damages expert to testify about the plaintiff's lost profits and to provide an opinion on a reasonable royalty. The defendants retained

accountant Daniel McGavock to minimize the plaintiff's damages evidence. The defendants also hired a liability expert, Michael Justice, to give expert testimony in support of the defendants' invalidity defenses, particularly the claim of obviousness. The plaintiff hired Phillip O'Keefe to rebut Justice's evidence.

Each side has raised objections to all or part of the testimony of the others' expert witnesses based on some violation of Federal Rule of Evidence 702 and the principles set out in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). They variously attack the witnesses' methodologies, contend that insufficient facts support their opinions, and maintain that flaws permeate their applications of the facts to the espoused theories. The Court will review the law that applies to its role as a gatekeeper who must screen expert testimony for reliability, and then discuss the specific objections that are directed to each of the witnesses.

## II.

Any challenge to expert testimony must begin with Rule 702 of the Federal Rules of Evidence, which was modified in December 2000 to reflect the Supreme Court's emphasis in *Daubert* and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), on the trial court's gatekeeping obligation to conduct a preliminary assessment of relevance and reliability whenever a witness testifies to an opinion based on specialized knowledge. Federal Rule of Evidence 702 states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

The language added by the amendment to Rule 702 — subparagraphs (b) through (c) — restates *Daubert*'s insistence on the requirements that an expert's opinion be based on a foundation grounded in the actual facts of the case, that the opinion is valid according to the discipline that furnished the base of special knowledge, and that the expert appropriately "fits" the facts of the case into the theories and methods he or she espouses. *See Daubert*, 509 U.S. at 591-93.

In addition, expert testimony is not admissible unless it will be helpful to the fact finder. Such testimony is unhelpful when it is unreliable or irrelevant, as the Court observed in *Daubert*, *see id.* at 591-92, and also when it merely deals with a proposition that is not beyond the ken of common knowledge, *see, e.g., Berry v. City of Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994) ("If everyone knows this, then we do not need an expert because the testimony will not 'assist the trier of fact to understand the evidence or to determine a fact in issue.'") (quoting Fed. R. Evid. 702). Finally, before an expert may give an opinion, the witness must be qualified to do so. *See id.* at 1348-50; *Morales v. Am. Honda Motor Co., Inc.*, 151 F.3d 500, 516 (6th Cir. 1998). The proponent of expert testimony must establish all the foundational elements of admissibility by a preponderance of proof. *Nelson v. Tenn. Gas Pipeline Co.*, 243 F.3d 244, 251 (6th Cir. 2001) (citing *Daubert*, 509 U.S. at 592 n.10).

An opinion is "reliable" from an evidentiary standpoint if it is "valid" according to the discipline upon which it is based. *See Daubert*, 509 U.S. at 590. In determining validity, the Court's focus is on principles and methodology, not results. There is no precise formula by which a court might deem a methodology "acceptable" or "unacceptable." *Daubert* and its progeny therefore have not created a "straitjacket," *Gross v. Comm'r*, 272 F.3d 333, 339 (6th Cir. 2001), but rather counsel a flexible approach, reconciling the "liberal thrust" of Rule 702, which "relax[es] the

traditional barriers to opinion testimony,” with the responsibility to “screen[] such evidence” in order to keep unreliable or invalid opinions from the jury. *Daubert*, 509 U.S. at 588-89; *see also Jahn v. Equine Servs., PSC*, 233 F.3d 382, 388 (6th Cir. 2000). “Although there is no ‘definitive checklist or test’ to strike th[e] balance [‘between a liberal admissibility standard for relevant evidence . . . and the need to exclude misleading junk science’], the *Daubert* Court set forth factors relevant to the inquiry: (1) whether the theory or technique can be or has been tested; (2) whether it ‘has been subjected to peer review and publication’; (3) whether there is a ‘known or potential rate of error’; and (4) whether the theory or technique enjoys general acceptance in the relevant scientific community.” *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671, 677 (6th Cir. 2011); *see also Newell Rubbermaid, Inc. v. Raymond Corp.*, 676 F.3d 521, 527 (6th Cir. 2012). Other factors may play a role as well. *See Zuzula v. ABB Power T & D Co.*, 267 F. Supp. 2d 703, 712-13 (E.D. Mich. 2003).

“[R]ejection of expert testimony is the exception, rather than the rule, and [the court] will generally permit testimony based on allegedly erroneous facts when there is some support for those facts in the record.” *In re Scrap Metal Antitrust Litigation*, 527 F.3d 517, 530 (6th Cir. 2008) (internal quotations and citations omitted).

#### A. Michael Justice

The most problematic of the witnesses is Michael Justice, a defense liability expert. The problems with Justice’s testimony stem from the fact that he did not draft his own report; defense counsel drafted it for him. The Court finds that practice to be a remarkable breach of ethics and protocol, which defense counsel brazenly attempted to justify at oral argument. Expert witnesses generally do not provide factual accounts of the contested issues, and their testimony need not be based on personal knowledge. *See Fed. R. Evid. 602*. Instead, they are permitted to comment on

the evidence that others supply. Fed. R. Evid. 703. Expert witnesses are allowed to testify based on information furnished by others because they have technical expertise in a given field that “will help the trier of fact to understand the evidence.” Fed. R. Evid. 702(a). An expert witness who is merely a party’s lawyer’s avatar contributes nothing useful to the decisional process.

The plaintiff argues that Justice’s opinions relating to invalidity and the attributes of one of ordinary skill in the art should be excluded because his report does not recite the legal principles that he applied and because he was unaware of the elements necessary to establish invalidity. More seriously, as noted above, the plaintiff asserts that Balluff’s counsel wrote Justice’s report; then Justice reviewed the draft of the 64-page report for only a couple of hours before signing it. That fact does not appear to be contested. Justice’s report simply mimics the summary of the prior art found in Balluff’s invalidity contentions, provides no basis for concluding that prior art references would be combined, assumes that the prior art should be combined, and reaches a conclusion without knowing the relevant factors. The plaintiff also argues that Justice does not furnish a basis for his invalidity analysis, does not tether his factual experience to his opinions, and relies on Balluff’s counsel for his analysis. According to the plaintiff, the majority of the 25 to 30 hours Justice spent working on the case was consumed by traveling to meet with Balluff executives. The plaintiff says that Justice represented that he spent less than eight hours reviewing technical literature, prior art references, and the patent; and he implausibly says that he reviewed nearly 2,600 pages of deposition transcripts in two to three hours.

Michael Justice is an entrepreneur, industrial networking expert, and the founder and president of Grid Connect Inc., a manufacturer and distributor of networking products and wireless sensors. He has a bachelor’s degree in computer engineering from the University of Illinois,

Champaign Urbana. He may indeed be competent to provide testimony in support of the invalidity defenses in this case. But he has surrendered his role to defense counsel, and that is not how the adversary process works.

The plaintiff asks the Court to strike sections E and H of Justice's report and bar related testimony. The problems with the witness extend beyond those sections, however.

Rule 26 of the Federal Rules of Civil Procedure states that expert testimony "must be accompanied by a written report — *prepared and signed by the witness.*" Fed. R. Civ. P. 26(a)(2)(B) (emphasis added). Nothing in the rule prohibits counsel from helping the witness prepare the report. *See* Advisory Comm. Notes for Fed. R. Civ. P. Rule 26 (noting that "Rule 26(a)(2)(B) does not preclude counsel from providing assistance to experts in preparing the reports, and indeed . . . this assistance may be needed"). But that help generally is limited to ensuring that Rule 26's formal requirements are satisfied. *James T. Scatuorchio Racing Stable v. Walmac Stud Mgt., LLC*, No. 5:11-374-DCR, 2014 WL 1744848, at \*6 (E.D. Ky. Apr. 30, 2014) (explaining that "counsel's assistance is generally limited to helping the expert draft a report in a way that satisfies the requirements of Rule 26"). The Rule does not permit a party to "prepare the report for the witness." *Ibid.* (citing Advisory Committee Notes for Fed. R. Civ. P. 26(a)(2)(B)); *see also Bekaert Corp. v. City of Dyersburg*, 256 F.R.D. 573, 578 (W.D. Tenn. 2009) (Rule 26 requires an expert to "substantially participate in the preparation of his report."); *Manning v. Crockett*, No. 95 C 3117, 1999 WL 342715, at \*6 (N.D. Ill. May 18, 1999) ("Preparation implies involvement other than perusing a report drafted by someone else and signing one's name at the bottom to signify agreement.").

Determining whether counsel crosses the line separating permissible assistance from improper participation in the expert's report writing calls for "a fact-specific inquiry." *McClellan v. I-Flow Corp.*, 710 F. Supp. 2d 1092, 1118 (D. Or. 2010). The key question is "whether counsel's participation so exceeds the bounds of legitimate assistance as to negate the possibility that the expert actually prepared his own report." *Bekaert*, 256 F.R.D. at 578. "[A]ssistance in the fine-tuning of an expert report in order to ensure compliance with [Rule 26(a)(2)(B)] is permissible, while 'preparing the expert's opinion from whole cloth and then asking the expert to sign it if he or she wishes to adopt it' is not." *Ibid.* (quoting *In re Jackson Nat. Life Ins. Co. Premium Litigation*, No. 96-MD-1122, 2000 WL 33654070, at \* 3 (W.D. Mich. Feb. 8, 2000)). As the court held in *Occulto v. Adamar of New Jersey, Inc.*, 125 F.R.D. 611 (D.N.J. 1989):

A party receiving an adversary's expert's signed report has a right to rely upon the document for what it purports to be — the expert's considered analysis of facts and statement of opinions applying the expert's special education, training and experience. Experts participate in a case because, ultimately, the trier of fact will be assisted by their opinions . . . . They do not participate as the alter-ego of the attorney who will be trying the case.

*Id.* at 615-16.

In most cases, expert witnesses are not attorneys, and they may not apprehend the required components of a report set forth in Rule 26(a)(2)(B). The retaining attorney certainly may explain the rule's requirements and coach the expert to be sure the report touches all the bases. That is a far cry, however, from abject ghostwriting, which is not allowed under any circumstances. *See Manning*, 1999 WL 342715, at \*3.

When the disclosure requirements of Rule 26 are violated, Rule 37 mandates preclusion of the evidence "unless the failure was substantially justified or is harmless." Fed. R. Civ. Pro. 37(c). "[T]he sanction is mandatory unless there is a reasonable explanation of why Rule 26 was not

complied with or the mistake was harmless.” *Bessemer & Lake Erie R.R. Co. v. Seaway Marine Transport*, 596 F.3d 357, 370 (6th Cir. 2010) (quoting *Vance ex rel Hammons v. United States*, 182 F.3d 920 (6th Cir. 1999)).

“Where an expert merely offers his client’s opinion as his own, that opinion may be excluded.” *ASK Chemicals, LP v. Computer Packages, Inc.*, No. 14-3041, 2104 WL 6911574, at \*4 (6th Cir. Dec. 10, 2014) (unpublished) (citations omitted). “Courts have found exclusion of an expert under Rule 37 appropriate when a report is improperly adopting the opinion of another.” *James T. Scatuorchio Racing Stable*, 2014 WL 1744848, at \*7. For instance, in *In re Jackson National Life Insurance Company Premium Litigation*, No. 96-MD-1122, 2000 WL 33654070 (W.D. Mich. Feb. 8, 2000), the court excluded an expert witness’s testimony when the expert did not prepare his own report. The court found “substantial similarities” between the expert’s report and the report of another expert prepared with assistance from the same counsel in an unrelated case. *Id.* at \*1. The conduct of counsel that such similarities implied, the court reasoned, “so exceeded the bounds of legitimate ‘assistance’ as to negate the possibility that [the expert] actually prepared his own report within the meaning of Rule 26(a)(2).” *Ibid.*

Similarly, in *James T. Scatuorchio Racing Stable*, 2014 WL 1744848, the court refused to allow an expert to testify because the expert did not draft his own report. Instead, counsel for the defendant drafted the report and gave it to the expert to review. The expert met with counsel for the defendant for 60 to 90 minutes, printed the report on his own letterhead, and signed it. The expert stated that, while edits were made to the draft report, the final report was 90 percent unchanged. Further, the expert could not identify any portion of his opinion, analysis, or subject matter that had

been removed or changed from the attorney's draft. In total, the expert said he spent approximately fifteen to twenty hours on the case, including attending meetings.

In this case, Justice conceded at his deposition that he did not draft the report. Instead, Ann G. Schoen, counsel for the defendants, drafted the report and gave it to Justice to review and sign. When questioned by the Court at oral argument, Ms. Schoen eventually acknowledged that she was the author of the first draft of the report. The defendants assert that on June 16, 2014, Justice met with counsel for the defendants for about eight hours to review the report, correcting parts of the report that did not reflect Justice's views of the case, and reviewing the prior art and patent. But Justice acknowledged that he made "fairly minor" changes and otherwise adopted the attorney's report — that is the only reasonable way to describe it — in its entirety. Had he drafted the report, he said, it would not have consumed sixty-five pages. He would have "boiled [it] down" to "five pages" after removing "the legalness out of it." Justice dep., dkt. #85-2, at 29. The report does not represent Justice's own commentary on the evidence; in fact, it is several degrees removed from his own work.

Further reinforcing this conclusion is Justice's inability to discuss any of the depositions listed in his report. Although the report Justice signed asserts that he reviewed twelve deposition transcripts before forming his opinions, Justice conceded at his own deposition that he "can't definitely" say that he read all of the documents listed in the report. *Id.* at 30. Justice testified that he considers the lawsuit "silly," "trivial" even, which may explain why he devoted only two or three hours to reviewing the 2,600 pages of deposition transcripts in the case and less than eight hours reviewing the technical literature, prior art references, and the '646 patent. He testified that all of the depositions "kind of blur together" to him and nothing stands out. *Id.* at 30, 41. In total, Justice

devoted less than 30 hours developing his opinions about the case, nearly half of which was spent at or traveling to the law office of Balluff's attorneys.

Moreover, the report contains the repeated assertions that the claims are obvious. *See, e.g.*, Justice Expert Report, dkt. #85-1, at 43 (“[T]he BDN device combined with the alpha-numeric display of the AS-i device renders claim 2 obvious.”); *id.* at 45 (“[T]he AS-i device renders claim 3 obvious.”); *id.* at 46 (“[T]he G2-2 device combined with the alpha-numeric display of the AS-i device renders claim 3 obvious.”); *id.* at 51 (“[C]laim 23 is invalid as being anticipated or obvious.”); *id.* at 52 (“[T]he AS-i modules render claim 24 obvious.”); *id.* at 53 (“[C]laim 25 is rendered obvious by the AS-i modules and the BDN device.”); *id.* at 56 (“[T]he G2-2 device combined with the alpha-numeric display of the AS-i device renders claim 31 obvious.”); *id.* at 61 (“[T]he ‘211 publication also anticipates or renders obvious claim 32.”). However, when pressed at his deposition, Justice admitted that he had no idea what “obviousness” means in the context of a patent lawsuit. *See* Justice dep., dkt. #85-2 at 38-39 (Q. And if I were to ask you what the elements of legal obviousness are, you wouldn’t be able to recite them; correct? A. Correct.); *see also* 37 (“I don’t know the legal standards.”). An expert may testify to the facts supporting a legal conclusion without testifying about the ultimate legal conclusion. *High Point Design LLC v. Buyers Direct, Inc.*, 730 F.3d 1301, 1313 (Fed. Cir. 2013) (“Although obviousness is assessed from the vantage point of an ordinary designer in the art, ‘an expert’s opinion on the legal conclusion of obviousness is neither necessary nor controlling.’ That said, an expert’s opinion may be relevant to the factual aspects of the analysis leading to that legal conclusion.”) (internal citations omitted). But Justice’s complete lack of knowledge about the factors relevant to assessing obviousness undermines the defendants’ assertion that Justice’s conclusions are his own.

Section H of the report illustrates the point. That section is nearly indistinguishable from Balluff's third supplemental invalidity contentions, which were disclosed on May 7, 2014, several months before Justice apparently signed the report. The pictures, charts, and diagrams are the same. The citations are identical. The prose is indistinguishable down to the punctuation, leading to only one possible conclusion: the report was ghost-written by Balluff's attorneys as a legal brief disguised (thinly) as an expert disclosure.

The analysis for the non-infringement argument of claim 2 is exemplary. Justice's commentary on that claim is copied nearly verbatim from the invalidity contentions. There is only one meaningful difference between the analyses: Justice inserted his name in place of Balluff's attorneys. *Compare* Third Supplemental Invalidity Contentions, dkt. #85-3 at 13 ("A photograph of another exemplary AS-i product, which *Balluff* understands to have been offered for sale by Turck by about September 30, 2005, is also provided:") *and* Justice Report, dkt. #85-1 at 38 ("A photograph of another exemplary AS-i product, which *I* understand to have been offered for sale by Turck by about September 30, 2005, is also provided:"). The rest of section H replicates Balluff's invalidity contentions as well. *Compare, e.g.,* Third Supplemental Invalidity Contentions, dkt. #85-3 at 22 ("As explained above, the AS-i modules, G2-2, and the BDN device included a 'housing having a plurality of externally available connectors for connecting to a plurality of externally available connectors for connecting to a plurality of input sensor and/or output devices' and disclose or suggest the numeric or alpha-numeric display, all as required by claim 22, and so render that claim invalid as being obvious or anticipated.") *and* Justice Report, dkt. #85-1 at 50 ("As explained above with respect to claim 3, the AS-i modules, G2-2, and the BDN device included a 'housing having a plurality of externally available connectors for connecting to a plurality of externally

available connectors for connecting to a plurality of input sensor and/or output devices’ and disclose or suggest the numeric or alpha-numeric display, all as required by claim 22, and so render that claim invalid as being obvious.”). The conclusion is inescapable that Justice is nothing more than a “highly qualified puppet” and the opinions in his report do not reflect his own reasoned views of the case. *See DataQuill Ltd. v. Handspring, Inc.*, No. 01 C 4635, 2003 WL 737785, at \*4 (N.D. Ill. Feb. 28, 2003).

As noted earlier, Numatics also argues that Justice’s opinions cannot satisfy Rule 702 because Justice never expressed an understanding of the legal factors that point to a conclusion of obviousness within the meaning of 35 U.S.C. § 103, and he failed to furnish a basis for his invalidity conclusions that was rooted in his expertise. Those faults are apparent from Justice’s deposition testimony, in which he acknowledged that he spent very little time reviewing the actual facts of the case, and confessed ignorance of the relevant factors relating to the concept of obviousness.

Because Mr. Justice did not furnish a report that even approximated his original work in this case, and he could not apply the facts of the case to the principles upon which an obviousness opinion necessarily is based, he cannot testify as an expert in this case. *See Fed. R. Evid. 702.* Proper application of the Court’s gatekeeping role requires this result. Unfortunately, dispensing justice in this case calls for dispensing with Justice.

#### B. Philip O’Keefe

The plaintiff identified Philip O’Keefe as a liability expert intended to rebut Michael Justice’s invalidity opinions. The defendants contend that O’Keefe did not use a proper methodology when assessing obviousness because (1) he improperly relied on the features of the multi-component G3 product rather than focusing on the claims of the ‘646 patent to rebut Justice’s

invalidity analysis; (2) he failed to consider all of the relevant factors when he concluded that there was no motivation to combine prior art references to produce the patented invention; (3) he improperly relied on the economic analysis of Michael Lasinski in reaching his conclusion that market success of the product rebuts the obviousness challenge; (4) he failed to analyze the differences between Balluff's accused products with displays and those without displays to determine whether the display drove sales; and (5) he wrongly cast sales as an unexpected result. The plaintiff responds that O'Keefe's methodology is not flawed and there is no basis for striking any part of his testimony.

Philip O'Keefe is the president of North Star Ideations, LLC; he is responsible for the development and design of digital and analog electronics, embedded systems, and components for medical devices, consumer products, and industrial innovations. O'Keefe is also the president of EngineeringExpert.net, LLC, and in that capacity provides engineering expert witness services, forensic engineering services, courtroom demonstrative services, and technical training services. O'Keefe submitted a report stating that the claims of the '646 patent are not anticipated or rendered obvious by the references cited or the arguments presented in Michael Justice's report.

O'Keefe argued in his report that Justice overstated the level of skill in the art needed to invent the plaintiff's product, asserting that Justice's conclusion about the level of skill is inconsistent with the skill of the inventors at the time of the invention. He said that the technology included in the '646 patent involves concepts taught in core electronics classes for an associate's degree in electronic engineering. He also believed that Justice's conclusion is based on guesswork. O'Keefe concluded that a person of ordinary skill in the art would have at least an associate's degree

in electronics, engineering technology, or its equivalent and at least three years of work experience in the field of industrial networks.

O’Keefe provided an overview of the prior art that Justice referenced in his report, noting that the prior art that Justice cited was never published (e.g., AS-Interface Brochure), was published outside of the United States (e.g. As-i/CC-Link User Manual), was secret (BDN product), or does not anticipate an alpha-numeric display (G2-2 product or Hirschmann presentation).

As one might anticipate in a rebuttal report, O’Keefe described why each of Justice’s arguments about invalidity are incorrect. In general, O’Keefe asserted that none of the prior art is sufficient to anticipate any of the contested claims; the claims in the ‘646 patent would not have been obvious to one skilled in the art in 2007; and cost restrictions, the absence of customer demand, and the absence of competing products with alpha-numeric displays suggest a lack of motivation to modify or combine the prior art to create an alpha-numeric display in serial fieldbus communication systems. Additionally, O’Keefe contends that the alpha-numeric display was in conflict with one or more standards or specifications for fieldbus products in 2007. O’Keefe argued that the developers of the G3 products were concerned that the product line may not be accepted or able to pass conformance testing. O’Keefe also argued that this uncertainty would have caused persons of ordinary skill in the art in 2007 to not pursue incorporation of alpha-numeric displays as an addressing option.

Justice failed to consider objective indicators of non-obviousness regarding the claims of the ‘646 patent, O’Keefe wrote, including the commercial success of the G3 product line and the Balluff products with displays. For instance, O’Keefe noted that the sales of the G3 product shows a substantial market preference for fieldbus products with alpha-numeric displays as compared to

fieldbus products without alpha-numeric displays. O’Keefe contended that Balluff’s sales information reinforced his opinion that the alpha-numeric display is the primary driver in the sale of the G3 product. O’Keefe noted that Balluff sells two general types of BNI products today — one with an alpha-numeric display and one without a display. O’Keefe says that Balluff’s sales demonstrate the same market preference for fieldbus products with alpha-numeric displays as compared to fieldbus products without displays.

Finally, O’Keefe said that the overwhelming and swift acceptance of the plaintiff’s product was not expected at the time of the invention. For example, O’Keefe noted that Numatics initially designed an alternative product out of concern that the industry would not accept the G3 product line. However, O’Keefe said that certain specifications in the industry were modified to permit use of a display in the industrial products. Those secondary considerations, he opined, point to the non-obvious conclusion.

The Court finds no flaws in the legal framework O’Keefe applied to his analysis. “A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000). The obviousness analysis begins with several basic factual inquiries: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations, including commercial success, long felt but unresolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Moreover, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific

combination that was made by the applicant.” *In re Kotzab*, 217 F.3d at 1370 (citing *In re Dance*, 160 F.3d 1339, 1343 (Fed. Cir. 1998)). “The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved.” *Ibid.* (internal citations omitted).

The defendants argue *first* that O’Keefe improperly relied on the G3 product rather than the claims in the ‘646 patent for his validity analysis. The defendants contend that the validity of the ‘646 patent must be limited to the claims, not to any particular embodiment of the claims. O’Keefe agreed with that concept in his deposition, noting that the “crux of the invalidity” analysis involved a comparison between the patent claims and the prior art. O’Keefe Dep., dkt. #99-5, at 104:15-22; *see also id.* at 104:24-105 (“you’re looking to see whether the claims are anticipated or whether they’re obvious under some combination [of] prior art.”). But in rebutting Justice’s invalidity analysis, O’Keefe also properly relied on the G3 product itself to explain why the claims are not obvious and why no motivation existed to combine the prior art. The “‘case law does not contain a blanket prohibition against comparing the accused product to a commercial embodiment’ in an infringement analysis.” *Merial Ltd. v. Cipla Ltd.*, 681 F.3d 1283, 1301 (Fed. Cir. 2012) (quoting *Adams Respiratory Therapeutics, Inc. v. Perrigo Co.*, 616 F.3d 1283, 1288 (Fed.Cir. 2010)). In his report, Justice characterized as “insubstantial” certain differences between the G2-2 and the G3 product lines. Justice Report, dkt. #110-2 at 31. In rebutting that characterization, O’Keefe described the differences between the product lines and the substantial investment necessary to develop the G3 products. O’Keefe Report, dkt. #99-2 at 9. There is nothing improper about providing context to understand how claims in a patent were developed or a particular embodiment of those claims.

In his report, Justice contended that the ‘646 patent was invalid for obviousness based on prior art. However, “[a]n element in determining obviousness of a new [product] is the motivation of one having ordinary skill in the art to make it. That motivation is not abstract, but practical, and is always related to the properties or uses one skilled in the art would expect the [product] to have, if made.” *Application of Gyurik*, 596 F.2d 1012, 1018 (C.C.P.A. 1979). “[I]f [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” 1 Patent Law Practice Forms § 13:6.71 (quoting *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)).

O’Keefe identified some of the practical barriers to combining the references Justice proposed. For example, several of the prior art references that Justice cited were not rated for the type of environment in which the G2-2 product operated. *See, e.g.*, dkt. #99-2 at ¶ 158; *see also* O’Keefe Dep., dkt. #99-5 at 122:24-124:17. O’Keefe pointed out that Justice failed to explain why a person of ordinary skill in the art would have been motivated to take a display from the prior art and adopt it for the G2-2 product if that action would have made the G2-2 product unfit for its operating environment:

[Justice] never did any analysis to show how you could take . . . for example one of the AS-i modules and combine it with the BDN product from Balluff . . . what kind of problems were then faced? Would it have been something somebody in the art would have wanted to do, what was their motivation to do that? So I was simply pointing out [in my report that] this was not a trivial process. I was referring to the G3 product, and I was explaining what the inventors had to go through to come up with the final product which is covered by the patent.

O’Keefe Dep., dkt. #99-5, at 104. Identifying such practical barriers to developing a new product is proper rebuttal testimony to Justice’s conclusion about obviousness.

*Second*, the defendants contend that O’Keefe identified numerous unprotected differences between the G3 product line and G2 product line and therefore O’Keefe’s testimony should be excluded. However, the defendants have failed to cite any authority that stands for the proposition that referencing non-patented features is objectionable. Those references to non-patented features of the product are not *per se* improper as a matter of law.

*Third*, the defendants argue that O’Keefe ignored certain motivations to combine the prior art and therefore should be precluded from testifying that there is no motivation to combine the prior art references that Balluff cites. “The party seeking a holding of invalidity based on a combination of two or more prior art teachings must show some motivation or suggestion to combine the teachings.” *Robotic Vision Sys., Inc. v. View Eng’g, Inc.*, 189 F.3d 1370, 1377 (Fed. Cir. 1999) (citing *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1323–24 (Fed. Cir.1999)). “[M]otivation to combine may be found explicitly or implicitly in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (quoting *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009)). O’Keefe did not ignore motivations to combine the prior art references. Instead, he responded to Justice’s invalidity analysis and concluded that the motivations that Justice proposed would not lead one of ordinary skill in the art to modify or combine the prior art. *See* O’Keefe Report, dkt. #99-2 at ¶¶ 136, 145, 146, 148, 157, 165, 170, 171, 177, 179, 181, 183-84, 191, 193, 196, 200-203, 223, 225, 227, 240-41, 247, 264, 279-90. O’Keefe may rebut Justice’s conclusions

by explaining why defense experts failed to identify any motivation to combine the prior art teachings or why his conclusions about motivation are erroneous.

*Fourth*, the defendants argue that O’Keefe’s testimony about secondary considerations should be excluded. Relevant secondary considerations include commercial success, long-felt but unsolved needs, failure of others, and unexpected results. *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 736 (Fed. Cir. 2013). “Evidence of secondary considerations, including evidence of unexpected results and commercial success, are but a part of the ‘totality of the evidence’ that is used to reach the ultimate conclusion of obviousness.” *Richardson Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1483 (Fed. Cir. 1997) (internal citations omitted). Although secondary considerations may be the most probative of obviousness, the existence of such evidence is not controlling. *Ibid.*

The defendants imply that O’Keefe’s analysis about the commercial success of the G3 product line is unreliable because he relied on Lasinski’s economic analysis. Evidence Rule 703 allows an expert to rely on information disclosed to him “if experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject.” Fed. R. Evid. 703. Rule 703 “does not predicate admissibility on the source of the facts or data or, in particular, on whether the source is employed by either of the parties.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1321 (Fed. Cir. 2014); *see also Williams v. Illinois*, 132 S. Ct. 2221, 2246 (2012) (Breyer, J., concurring) (“Experts . . . regularly rely on the technical statements and results of other experts to form their own opinions.”); *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 675 (6th Cir.2010) (“an expert may in some circumstances rely on other experts’ testimony — *see* Fed. R. Evid. 703”); *Matter of James Wilson Assoc.*, 965 F.2d 160, 172 (7th Cir.1992) (“An expert is of course permitted to testify to an opinion formed on the basis of information that is handed to rather than developed

by him — information of which he lacks first-hand knowledge and which might not be admissible in evidence no matter by whom presented.”).

The defendants do not argue that an invalidity expert would not rely on Lasinski’s facts or data in forming an opinion on a product’s commercial success. Instead, the defendants contend that Lasinski failed to provide any evidence that an increase in the sales of the Balluff accused products was attributable solely to the display. That argument is addressed below; reliance on Lasinski’s opinion is not disqualifying here. Moreover, O’Keefe did not rely exclusively on Lasinski’s analysis as a basis for his opinion that the display drove G3 sales. In his report, O’Keefe identified other sources, including (1) Numatics’s employees, notably the deposition of Mark Madsen; (2) a conversation with Enrico DeCarolus; (3) feedback from beta testing Numatics’s customers; and (4) Numatics’s marketing materials as the basis for his conclusion that the display is a significant driver of the product sales.

Further, the defendants argue that the Court should exclude O’Keefe’s testimony about unexpected results. “One way for a patent applicant to rebut a *prima facie* case of obviousness is to make a showing of ‘unexpected results,’ *i.e.*, to show that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected.” *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995). “The basic principle behind this rule is straightforward — that which would have been surprising to a person of ordinary skill in a particular art would not have been obvious.” *Ibid.*

O’Keefe concluded that the industry’s acceptance of the G3 product line is an unexpected result. But “[c]ommercial success, . . . even if unexpected, is not part of the ‘unexpected results’ inquiry.” *Media Technologies Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1334, 1339 (Fed. Cir.

2010). “An unexpected result must arise from combining prior art elements; commercial success is a separate inquiry from unexpected results.” *Ibid*. In his deposition, O’Keefe conceded that there is nothing unexpected about how the G3 products function:

Q. With respect to the function of the display or the function of the display in the G3 product, is there anything unexpected about how it operates?

A. I don’t think so.

O’Keefe dep., dkt. #99-5, at 263. O’Keefe’s report and deposition testimony does not provide any basis to conclude that the G3 product line produced unexpected results. However, that does not disqualify the opinion, which is based on additional factors as well. Moreover, the defendants’ motion is addressed to the merits of the plaintiff’s claims, not O’Keefe’s qualifications, reliability, or methodology. *See United States v. Bonds*, 12 F.3d 540, 556 (6th Cir. 1993) (“The focus [of a *Daubert* analysis], of course, must be solely on principles and methodology, not on the conclusions that [the experts] generate.”) (citations omitted). The defendants’ challenge addresses the weight of the evidence, not its admissibility.

C. Michael J. Lasinski

The defendants argue that the methods for calculating lost profits and a reasonable royalty rate used by the plaintiff’s damages expert, Michael Lasinski, are flawed. Lasinski is a Managing Director and the Chief Executive Officer of 284 Partners, LLC, a professional services firm focused on intellectual property valuation, litigation consulting, IP strategy, and IP transactional services. Lasinski prepared a report calculating lost profit damages and reasonable royalty damages resulting from the alleged infringement, concluding that Numatics is entitled to \$331,289 if Numatics prevails on liability. That total consists of \$101,947 in lost profits from lost sales, \$111,578 in lost profits from slave products, and \$117,764 in reasonable royalty damages.

Lasinski calculated lost profits by demonstrating (1) the demand for the patented product; (2) the absence of acceptable non-infringing substitutes; (3) Numatics's manufacturing and marketing capability to exploit the demand; and (4) the amount of profit that Numatics would have made without the defendants' infringement. Lasinski calculated reasonable royalty damages using a hypothetical negotiation framework. He considered prior royalty agreements between Numatics and other companies, including Rockwell Automation Technologies, Inc. However, Lasinski found that the Rockwell license is not comparable to the hypothetical license with the defendants. Lasinski also considered the plaintiff's license agreement with Festo AG & Co. However, he found that the Festo license is not comparable to the hypothetical license. Lasinski ultimately applied an income approach to calculating a reasonable royalty.

#### 1. Lost profits

To be entitled to lost profits, a patent holder must establish a reasonable probability that but for the infringement, it would have made the sales that were made by the infringer. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995). Courts have not restricted patentees to any one particular method of proving "but for" causation. *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1122 (Fed. Cir. 2003). "A patentee may resort to any method showing, with reasonable probability, entitlement to lost profits 'but for' the infringement." *Ibid.* If the patentee establishes the reasonableness of the inference, the burden shifts to the infringer to show that the inference is unreasonable for some or all of the lost profits. *Ibid.*

In *Panduit Corporation v. Stahl Brothers Fibre Works, Incorporated*, 575 F.2d 1152 (6th Cir. 1978), the Sixth Circuit described four factors to consider in determining damages for lost profits: (1) demand for the patented product; (2) absence of acceptable non-infringing substitutes;

(3) manufacturing and marketing capability to exploit the demand; and (4) the amount of the profit the patentee would have made. *Id.* at 1156. The *Panduit* test is one recognized method for showing “but for” causation.

Applying that test, Lasinski *first* determined that demand existed for the patented product. “This factor does not require any allocation of consumer demand among the various limitations recited in a patent claim.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009). In his report, Lasinski noted that Numatics has generated over \$13.9 million from sales of G3 network connectivity devices and Balluff has generated over \$2.6 million in sales from devices incorporating the patented technology. Lasinski concluded that those sales are driven by the benefits of the ‘646 patent. He reached that conclusion after evaluating an internal Numatics presentation that identified the graphic display as one of five key features in the product; promotional materials for the G3 line of products that listed the graphic display before any other feature of the product; promotional materials that describe the graphic display as the product’s “real innovation;” feedback from customers; and Balluff’s own assessment identifying the graphic display as one of the strengths of the G3 products. Lasinski also noted that Balluff’s customers have a strong preference for Network Connectivity Blocks with displays over alternative technologies; Balluff’s marketing presentations emphasized the graphic display’s advantages; and a sales presentation described the display as a “feature to lead with” in marketing the product to competitors.

*Second*, Lasinski noted the lack of acceptable non-infringing alternatives. “[I]n order to justify a reduced damage award for lost profits the controlling issue is whether the competitors sell an acceptable non-infringing substitute.” *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 1545

(Fed. Cir. 1991). Lasinski concluded that the non-infringing substitutes lacked the advantages of the patented device. For instance, rotary dials have limited functionality and are vulnerable to tampering; software addressing does not provide a user with the ability to change the address directly on a Network Connectivity Block; and an Internet Protocol Address Plug does not permit users to address a Network Connectivity Block locally. Moreover, Lasinski noted that Balluff itself considered and rejected the option of eliminating the integrated displays on its Network Connectivity Blocks.

*Third*, Lasinski testified that Numatics's had the manufacturing and marketing capability to exploit demand. He noted that Numatics's manufacturing facility has the ability to grow capacity with demand, and Numatics maintains relationships with contractors capable of providing electronic components for G3 devices if demand increases. He also noted that Numatics maintains a staff of 130 direct sales people, 54 distributors carry Numatics's products, and Numatics directly competes with Balluff in the marketplace.

*Fourth*, Lasinski calculated that Numatics lost \$213,525 in profits from products directly infringing the '646 patent and other associated products. He arrived at that figure after concluding that approximately 2,639 unit sales directly infringed the '646 patent and Balluff sold 2,011 slave products, of which 65.1 percent were subject to lost profits.

Lasinski's methodology was sound; he reasonably applied the *Panduit* test — an accepted and reliable methodology — to reach his conclusion about Numatics's lost profits.

The defendants argue that Lasinski's method is flawed because he assumed that, but for the infringement, Numatics would have captured all of Balluff's sales. It is true that "[t]he '*ipse dixit* of the expert' alone is not sufficient to permit the admission of an opinion." *Tamraz v. Lincoln Elec.*

*Co.*, 620 F.3d 665, 671 (6th Cir. 2010). “[N]o matter how good’ experts’ credentials may be, they are ‘not permitted to speculate.’” *Ibid.* (quoting *Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1088 (10th Cir. 2000)). But it appears that the defendants have misapprehended Lasinski’s testimony. It is not based on his own speculation; instead, Lasinski considered possible non-infringing substitutes and concluded that none of the substitutes had the advantages of the graphic display. Nevertheless, Lasinski determined that rotary dials *could* provide most of the benefits of a display on DeviceNet and Profibus devices and, accordingly, he did not consider those sales in his lost profits analysis.

Balluff also argues that Lasinski could have, but failed, to apply a customer-by-customer analysis or market-share approach. However, the Federal Circuit “has not restricted patentees to any one particular method of proving ‘but for’ causation.” *Micro Chem.*, 318 F.3d at 1122. And the *Panduit* test, which Lasinski applied, is a well-established method for showing “but for” causation.

The defendants argue further that Lasinski should have made market-share adjustments to account for the presence of other competitors in the marketplace and apportioned those sales the patentee would likely have made from those that would likely have gone to other competitors. But the “[m]ere existence of a competing device does not make that device an acceptable substitute.” *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d at 1545 (internal quotations omitted). “A product lacking the advantages of that patented [device] can hardly be termed a substitute ‘acceptable’ to the customer who wants those advantages.” *Id.* at 1545-46 (internal quotations omitted). Therefore, even if Numatics and Balluff are “small players” in the network connectivity market, it does not necessarily follow that there are acceptable non-infringing substitutes in the market. *See TWI Mfg. Co., Inc. v. Dura Corp.*, 789 F.2d 895, 901 (Fed. Cir. 1986) (holding that even though 30 percent

of the relevant market was held by competitors, it did not necessarily follow that acceptable non-infringing substitutes existed in the market). Lasinski considered possible non-infringing substitutes in the market and concluded that none existed. He reasonably concluded that Numatics and Balluff are the only suppliers in the market for network connectivity devices with displays even if they are otherwise small players in the general network connectivity market.

Balluff next argues that Lasinski's allocation of one hundred percent of the accused sales to Numatics is based on the assumption that the demand for the patented products is driven almost entirely by the alpha-numeric display. The Court does not view Lasinski's testimony that way. Lasinski did not merely assume that the display is the primary feature that drives sales. His conclusion is based on a comparison of sales data for network connectivity products with and without the patented feature, marketing materials, deposition testimony, Balluff's own analysis of the G3 line of products, and customer feedback. For instance, Numatics's video promotional materials point out that the "real innovation G3 brings to the table is the graphical display — an easy-to-read, easy-to-use feature that tells you exactly what the problem is and where." That conclusion is bolstered by Balluff's own data: since 2011 substantially all the growth in Balluff's Network Connectivity Block sales has come from products that are alleged to embody the '646 patent. And Balluff's customers selected Network Connectivity Block products with a display 99.9 percent of the time for EtherNet/IP and 99.4 percent of the time for Profinet.

The defendants argue that the evidence Lasinski relies on does not support a conclusion that the display is a driving feature. However, even if the evidence does not support Lasinski's conclusion, "[a] judge must be cautious not to overstep its gatekeeping role and weigh facts, evaluate the correctness of conclusions, impose its own preferred methodology, or judge credibility, including

the credibility of one expert over another.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d at 1314. “These tasks are solely reserved for the fact finder.” *Ibid.* “That the gatekeeping role of the judge is limited to excluding testimony based on unreliable principles and methods is particularly essential in the context of patent damages.” *Ibid.* The Federal Circuit “has recognized that questions regarding which facts are most relevant or reliable to calculating a reasonable royalty are “‘for the jury.’” *Ibid.*

The defendants contend that some customers may have purchased Balluff’s products even without the display due to its size or shape or IO Link. But Balluff’s own documents tell sales staff to “[l]imit your use of IO-Link” in sales pitches because “[n]o one cares how ‘slice I/O modules’ talk to the master.” Balluff Marketing Slides, dkt. #121-1 at 3. And even if some customers would have purchased the product anyway, that does not render Lasinski’s methodology unreliable. “The patent holder does not need to negate *all* possibilities that a purchaser might have bought a different product or might have foregone the purchase altogether.” *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 21 (Fed. Cir. 1984). “The ‘but for’ rule only requires the patentee to provide proof to a reasonable probability that the sale would have been made but for the infringement.” *Ibid.*

Lasinski reasonably applied a recognized methodology to the facts of the case in a reliable way to reach his conclusions. His testimony passes muster under Rule 702 and will be allowed.

#### B. Reasonable royalty

Upon a showing of infringement, a patentee is entitled to “‘damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.’” *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010) (quoting 35 U.S.C. § 284). “A reasonable royalty is, of course, ‘merely the floor below which damages shall

not fall.” *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009) (quoting *Bandag, Inc. v. Gerrard Tire Co.*, 704 F.2d 1578, 1583 (Fed. Cir. 1983)). “Section 284 does not mandate how the district court must compute that figure, only that the figure compensate for the infringement.” *TWM Mfg. Co.*, 789 F.2d at 899.

In his report, Lasinski considered and rejected several approaches to quantifying a reasonable royalty, including the cost approach and market approach. Ultimately, he concluded that the income (or analytic) approach provided the most accurate method for calculating a reasonable royalty. The Federal Circuit has approved the income or analytic approach. *See TWM Mfg. Co.*, 789 F.2d at 899; *see also Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 22 (Fed. Cir. 1984) (“The incremental income approach to the computation of lost profits is well established in the law relating to patent damages.”). Under that approach, a reasonable royalty is calculated based on a product’s profit margins. *Lucent*, 580 F.3d at 1324 (explaining that “the analytic method[] focuses on the infringer’s projections of profit for the infringing product”). Based on his calculations, Lasinski concluded a “conservative” reasonable royalty between 6.9 percent and 13.2 percent.

The defendants do not challenge these rates. Instead, they argue that Lasinski failed to consider that the profit premium is not solely attributable to the fact that the G3 product has a display and the G2 product does not. Lasinski emphasized throughout his 65 page report that the primary driver of G3 sales is the display. But that conclusion did not come from thin air. Numatics’s Director of Marketing told Lasinski that customers believe that the major benefit of the G3 line of products comes from the display. Similarly, Scott Weickel, Numatics’s Director of Engineering, testified that Numatics’s primary intent in developing the concept for the G3 product line was to introduce a more intuitive display. Numatics’s marketing materials confirm this

testimony. *See* Lasinski Report, dkt. #99-1, at 52 (“[T]he real innovation G3 brings to the table is the graphical display — an easy-to-read, easy-to-use feature that tells you exactly what the problem is and where.”).

After calculating a reasonable royalty between 6.9 percent and 13.2 percent, Lasinski applied the relevant fifteen factors in *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970). Those factors are:

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the product made under the patent; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.
11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

14. The opinion testimony of qualified experts.

15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee— who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention— would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

*Ibid.* Lasinski concluded that all but one of those factors suggested a royalty on the higher end would be appropriate. Nevertheless, Lasinski opined that a reasonable outcome of a hypothetical negotiation would result in a royalty of 8.0 percent, 5.2 percent lower than his highest profit premium rate. Lasinski arrived at that figure after assessing factor thirteen described in *Georgia Pacific*, which considers the portion of realizable profit that should be credited to the non-patented elements of the invention:

I understand that the primary difference between Numatics's patent-practicing G3 products and its predecessor network connectivity products was the integration of the patented display. However, I am also aware that the G3 products incorporate other improvements that do not relate to the '646 Patent, and that these features may contribute to demand for and profitability of these G3 products. For example, I understand that the G3 products offer increased modularity, in that Network Connectivity Blocks can be distributed throughout a machine without disassembling an entire network assembly. Numatics also promotes both the G3 products' "SPEEDCON" connectors, which allow users to more quickly and easily connect cabling to modules, as well as the option for users to add an Auto Recovery Module to their network to protect against system failures.

Lasinski Report, dkt. #99-1, at 68-69. The defendants' argument that Lasinski miscalculated the profit premium is meritless.

The defendants also argue that Lasinski did not use any specific methodology to reach a reasonable royalty of 8.0 percent. Not so. Lasinski used accepted methodologies — the income

approach and the application of the *Georgia-Pacific* factors — to reach his royalty recommendation.

The defendants argue that Lasinski’s figure is not supported by a rigorous determination. *Id.* at 13. But “estimating a ‘reasonable royalty’ is not an exact science.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1315 (Fed. Cir. 2014). “[T]he record may support a range of ‘reasonable’ royalties, rather than a single value.” *Ibid.* The analysis “necessarily involves an element of approximation and uncertainty.” *Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 517 (Fed. Cir. 1995). Nevertheless, “[a]ny rate determined by the trier of fact must be supported by relevant evidence in the record.” *Ibid.* Lasinski’s recommendation is supported by the record and, accordingly, he may testify about it.

Finally, the defendants argue that Lasinski failed to consider the Numatics’s license with Rockwell in calculating a reasonable royalty. The Federal Circuit “has long required district courts performing reasonable royalty calculations to exercise vigilance when considering past licenses to technologies *other* than the patent in suit.” *ResQNet.com*, 594 F.3d at 869. “[L]oose or vague comparability between different technologies or licenses does not suffice.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 79 (Fed. Cir. 2012). A district court “‘must account for differences in the technologies and economic circumstances of the contracting parties[.]’” *Virnetx, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1330 (Fed. Cir. 2014) (quoting *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1211 (Fed. Cir. 2010)).

Here, Lasinski thoroughly analyzed Numatics’s license with Rockwell and concluded that it was not indicative of a reasonable royalty for the ‘646 patent. He did so after finding that the technology in the Rockwell license was unrelated to the benefits of a display and, unlike the

technology at issue here, was only used by a small percentage of Numatics's customers. Lasinski's testimony is acceptable under the criteria in Rule 702 and *Daubert v. Merrell Dow Pharm., Inc.*

### 3. Charts

Balluff argues that specific charts that Lasinski created are misleading and unfair. Defs.' Mot. at 14. The plaintiff contends that the charts demonstrate many of Lasinski's points in different ways: sales trends of devices with displays are growing while sales trends of devices without displays are declining. Although the defendants' argument may be appropriate for a motion *in limine* at the proper time, it is not a ground for exclusion of evidence under Rule 702. The defendants may revisit the issue before trial if the plaintiff intends to use the charts as demonstrative exhibits.

#### D. Daniel M. McGavock

The plaintiff has moved to preclude portions of the testimony of Daniel McGavock, the damages expert from whom the defendants seek an opinion on a reasonable royalty. McGavock is a certified public accountant, certified licensing professional, and the vice president of Charles River Associates (CRA). His consulting work is primarily concentrated on the valuation and strategic management of intellectual property assets, including patents, trade secrets, trademarks, and copyrights. He has valued intellectual property rights in connection with litigation, licensing, joint venture transactions, mergers and acquisitions, inter-company transfer pricing, and tax-related transactions.

The plaintiff's challenge is to testimony that would be based on section 8 of McGavock's report, in which McGavock opined about a reasonable royalty based on a hypothetical negotiation between the parties. The plaintiff's main criticism focuses on McGavock's assumption that the

defendants would not pay more than 50 percent of its profit margin as a royalty for the patented technology, which, the plaintiff believes, incorporates a methodology condemned by the Federal Circuit.

McGavock evaluated three basic valuation approaches: cost (which he found inapplicable here), market, and income. He explained that the cost approach determines value based on the cost to replace the infringing technology with an equivalent alternative. He concluded that this approach is not appropriate to evaluate a reasonable royalty because Balluff has chosen to continue selling products with an alpha-numeric display and not to pursue any possible non-infringing alternatives.

McGavock acknowledged that the market approach values assets based on comparable arm's length transactions between unrelated parties. He understood that Numatics entered into two license agreements, one with Festo and the other with Rockwell Automation Technologies. He disregarded the agreement with Festo because it is not comparable to the technology at issue in this case, since the agreement was a cross-license. However, McGavock concluded that the technology in the Rockwell license is sufficiently similar to provide insight into the royalty rate for the technology involved here. The Rockwell agreement involved a license to certain copyrights, trade secrets, and patent applications related to DeviceLogix technology. In exchange for the use of the technology, Numatics agreed to pay Rockwell \$35,000 and royalties of 2.0 percent of the licensed products' list price for the licensed technical information and 1.0 percent of the licensed products' list price for the rights to the patent application. McGavock reasoned that the Rockwell agreement is reasonably comparable to the hypothetical negotiation here because (1) the license involves Numatics and another competitor in the field of industrial automation; (2) the license covers a product feature included in electronic communication devices sold by Numatics as part of the G3 system; (3) the

license was negotiated at arm's length outside of the context of litigation; (4) the license is non-exclusive; (5) the term of the license overlaps the period of alleged infringement; and (6) the license provides a separate royalty rate for patent rights. McGavock conceded that the Rockwell license relates to software and not hardware; however, he concluded that the benefits of the DeviceLogix technology have some similarities to the alpha-numeric display at issue in this case because both technologies relate to the ability to decentralize certain functions in an industrial control network. Therefore, McGavock concluded, it is appropriate to take into consideration the 1.0 percent royalty for the Rockwell technology in assessing a reasonable royalty for the '646 patent.

When addressing the income approach, which derives a reasonable royalty based on the anticipated economic benefit or profit generated by the licensed patent, McGavock pointed out the difficulty in application. He stated that one method for determining a profit-based royalty rate compares the profit margins earned on the patented product versus the profits earned on non-patented products. The limitation to that method, he stated, is that it yields a true result only when the comparison is between products in which the only difference is the patented feature, which is rarely the case. Nonetheless, he attempted to apply this approach.

In reaching a royalty rate, McGavock considered Balluff's overall operating margins as an important factor that the parties would have considered in the hypothetical negotiation. McGavock reasoned that it is appropriate to consider the company's overall profitability when analyzing how much Balluff could afford to pay as a royalty because Balluff may sell certain products at a loss in order to make a sale of a project that is profitable on the whole. McGavock believed that Balluff itself analyzes its profitability on the overall sales for a given customer rather than on a product by product basis.

Moreover, McGavock contended that Balluff would recognize that its profits are cyclical and it would negotiate a license that would cover its products for several years into the future. Consequently, McGavock argued that Balluff would consider its long-term average profit margin when negotiating a license, rather than its margins in recent years, which were negatively impacted by the recession, or in the immediate future, which were positively impacted by the subsequent recovery. McGavock noted that the company's operating margin ranged from -4.4 percent to +11.6 percent from 2007 to May 2014, with a weighted average of 6.4 percent. McGavock argued in his report that this long-run operating margin serves as the most reliable starting point for determining "the portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements" brought to the table by Balluff. McGavock contended that prudent negotiators on both sides of the table would recognize that a royalty rate for a naked, nonexclusive license to the '646 patent "could not possibly be more than 3.2%, which represents half of Balluff's expected long run profit margin," that is, no more than 50 percent of its profit margin.

McGavock noted that the income approach generally focuses on the profits generated by the licensee in determining a royalty. *Ibid.* However, McGavock stated that a licensor may factor lost sales that may result from granting a license to a competitor. He considered Numatics's claimed lost profits and concludes that Numatics's minimum royalty rate would be .5 percent of revenue.

Having considered the market and income approaches, McGavock derived a baseline range of royalty rates for the hypothetical negotiation between .5 percent and 3.2 percent of accused revenue. McGavock then opined that the likely outcome of the hypothetical negotiation is a 2.0 percent royalty after adjusting for the *Georgia-Pacific* factors. Based on a royalty base of

\$2,511,510 and a royalty rate of 2.0 percent, McGavock concluded that reasonable royalty damages would be appropriate in the amount of \$50,230.

Upon a showing of infringement, a patentee is entitled to “damages adequate to compensate the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.” 35 U.S.C. § 284. The reasonable royalty determination is based on a hypothetical negotiation between the plaintiff and defendant. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1312 (Fed. Cir. 2011) (citing *Wang Labs. Inc. v. Toshiba Corp.*, 993 F.2d 858, 869-70 (Fed. Cir. 1993)). The hypothetical negotiation “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before the infringement began.” *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324-25 (Fed. Cir. 2009) (citations omitted). “Determining a fair and reasonable royalty is often . . . a difficult judicial chore, seeming often to involve more the talents of a conjurer than those of a judge.” *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 1574 (Fed. Cir. 1988), *overruled on other grounds by Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004). “[A]ny reasonable royalty analysis ‘necessarily involves an element of approximation and uncertainty.’” *Lucent Technologies*, 580 F.3d at 1324-25 (quoting *Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 517 n.8 (Fed. Cir. 1995)). Nonetheless, “a reasonable royalty analysis requires a court to hypothesize, not to speculate.” *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010) (citing *Fromson*, 853 F.2d at 1575). “Any rate determined by the trier of fact must have” “some factual basis” and must “be supported by relevant evidence in the record.” *Unisplay*, 69 F.3d at 517.

“[O]ne major determinant of whether an expert should be excluded under *Daubert* is whether he has justified the application of a general theory to the facts of the case.” *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1316 (Fed. Cir. 2011). If an expert fails to tie the royalty rate to the facts of the case, “the testimony must be excluded.” *Uniloc*, 632 F.3d at 1316 (citing *Daubert*, 509 U.S. at 591 (“An additional consideration under Rule 702—and another aspect of relevancy—is whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.”)). That is because “nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.” *Joiner*, 522 U.S. at 146. “A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.” *Ibid.* (citing *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (1992)).

As noted above, the plaintiff contends that McGavock’s damages analysis is unreliable because McGavock assumed that Balluff would not pay a royalty rate that exceeded 50 percent of its profit margin to license the ‘646 patent. In *Uniloc USA, Inc. v. Microsoft Corp.*, the Federal Circuit rejected a 25-percent rule of thumb to approximate a reasonable royalty rate. The court described the rule of thumb as a “fundamentally flawed tool” because it fails to tie the royalty rate to the particular facts of the dispute. 632 F.3d at 1315. Similarly, in *Virntex, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308 (Fed Cir. 2014), the Federal Circuit excluded testimony from the plaintiff’s damages expert whose royalty rate relied on a 50/50 profit split. The 50/50 profit split, also known as the Nash Bargaining Solution, called for each bargainer to receive 50 percent of the profits in any negotiation. Invoking the Nash Bargaining Solution, the expert assumed that each party would take 50 percent of the profits and then adjusted that split based on the relative bargaining power of the

two entities. However, the Federal Circuit excluded the expert's testimony because it failed to account for the particular facts of the case.

In his report, McGavock calculated a long-term profit margin of 6.4 percent and concluded that Balluff would not pay more than 50 percent of that rate for a license. The defendants contend that McGavock's methodology is reliable because the 50-percent cap was only a "starting point" rather than the "end result." Defs.' Resp. at 7; *see also* McGavock dep., dkt. #93-1 at 398 ("I have determined that a reasonable starting point to inform a range of negotiation that 3.2 percent would be reasonable, but it's just a starting point."); 399 ("50 percent . . . [is] my view of what would be a reasonable starting point. . . . I am concluding that prudent negotiators could not . . . start[] with anything higher than 50 percent, and it would in my view be substantially lower than 50 percent."). However, "damages cannot stand if any part of the calculation leading to it was unsupported or contrary to law." *Lucent Technologies, Inc. v. Microsoft Corp.*, 837 F. Supp. 2d 1107, 1112 (S.D. Cal. 2011) (citing *Uniloc*, 632 F.3d at 1317, 1321). The Federal Circuit has rejected any reliance on a rule of thumb, even if it only forms the starting point for a royalty analysis. *Uniloc*, 632 F.3d at 1317 ("It is of no moment that the 25 percent rule of thumb is offered merely as a starting point to which the Georgia-Pacific factors are then applied to bring the rate up or down. Beginning from a fundamentally flawed premise and adjusting it based on legitimate considerations specific to the facts of the case nevertheless results in a fundamentally flawed conclusion."); *Virnetx*, 767 F.3d at 1333 (noting that "the use of a 50/50 starting point — itself unjustified by evidence about the particular facts — provides a baseline from which juries might hesitate to stray, even if the evidence supported a radically different fit.").

The defendants point out that courts have rejected *Daubert* challenges to experts that rely on a 50/50 profit split in at least four cases, citing *Mformation Techs., Inc. v. Research in Motion Ltd.*, No. 08-4990, 2012 WL 1142537, at \*3 n. 19 (N.D. Cal. Mar. 29, 2012); *Gen-Probe Inc. v. Becton Dickinson & Co.*, No. 09-2319, 2012 WL 9335913, at \*3 (S.D. Cal. Nov. 26, 2012); *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharms. Inc., Inc., USA*, No. 07-5855, 2011 WL 383861, at \*12-13 (D.N.J. Feb. 3, 2011); *Amakua Dev. LLC v. Warner*, No. 05-3082, 2007 WL 2028186, at \*20 (N.D. Ill. July 10, 2007). Those cases provide the defendant no help, however, because the Federal Circuit in *Virnetx* considered — and rejected — the courts’ conclusions in all four of those cases. *Virnetx*, 767 F.3d at 1332. The *Virnetx* court could not have been clearer: “the suggestion that . . . profits be split on a 50/50 basis — even when adjusted to account for certain individual circumstances — is insufficient[] . . . and cannot be supported.” *Id.* at 1334.

The defendants argue that McGavock did not apply a 50/50 rule of thumb at all, but reached his conclusion based on the specific facts of the case. “To ensure damages figures are not conjectural or speculative, a starting point should be tied to case-specific factors grounded in reliable data, such as the parties’ relative bargaining power, the relationship between the patented invention and the accused product, other licenses involving the same patent, and analogous licenses in the industry for patents covering component parts.” *Digital Reg of Texas, LLC v. Adobe Sys., Inc.*, No. C 12 1971 CW, 2014 WL 4090550, at \*2 (N.D. Cal. Aug. 19, 2014). McGavock testified at deposition that he reached his conclusions about the 50-percent ceiling based on his experience and common sense. McGavock dep., dkt. #93-1 at 399 (“I . . . rely on my experience and common sense.”); 400 (Q. Has that been subjected to peer review and publication, that 50 percent? A. Well, ultimately the 50 percent is my informed subjective estimate based on my experience . . . and given

the facts in this case.”). But vague references to experience and common sense cannot save McGavock’s royalty analysis. *See Digital Reg of Texas*, 2014 WL 4090550, at \*2 (rejecting a royalty rate based on the expert’s “vague, undisclosed general experience”).

McGavock does suggest in his deposition that the 50-percent ceiling is confirmed by Numatics’s license with Rockwell. McGavock dep., dkt. #93-1, at 397-98. However, McGavock also stated that the Rockwell license was “not that important” in reaching the 50-percent ceiling and he instead “rel[ied] more on [his] experience and common sense.” *Id.* at 399. And Numatics contends that McGavock’s calculations about the Rockwell license are wholly inaccurate. The defendants have not identified, and the Court has not found, factual support for McGavock’s royalty rate conclusion beyond his “informed subjective estimate.” As mentioned earlier, “[t]he ‘ipse dixit of the expert’ alone is not sufficient to permit the admission of an opinion.” *Tamraz*, 620 F.3d at 671. “[N]o matter how good ‘experts’ credentials may be, they are ‘not permitted to speculate.’” *Ibid.* (quoting *Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1088 (10th Cir. 2000)). McGavock may not testify about a reasonable royalty because his opinions are not tied to the specific facts of the case.

### III.

Michael Justice did not furnish a report of his own that even approximated his original work in this case, and he could not apply the facts of the case to the principles upon which an obviousness opinion necessarily is based. Daniel McGavock’s opinion on a reasonable royalty was not based on reliable or accepted principles and methods. The opinions of Michael J. Lasinski and Phillip O’Keefe are admissible under Federal Rule of Evidence 702.

Accordingly, it is **ORDERED** that the plaintiff's motion to strike portions of the testimony of Michael Justice [dkt. #84] is **GRANTED**. Michael Justice may not testify as an expert witness in this case.

It is further **ORDERED** that the defendants' motion to exclude the testimony of Michael J. Lasinski and Philip O'Keefe [dkt. 81] is **DENIED**.

It is further **ORDERED** that the plaintiff's motion to exclude portions of the testimony of Daniel M. McGavock [dkt. #101] is **GRANTED**. Daniel M. McGavock may not testify about his opinion on a reasonable royalty as damages in this case.

Dated: December 16, 2014

s/David M. Lawson  
DAVID M. LAWSON  
United States District Judge

**PROOF OF SERVICE**

The undersigned certifies that a copy of the foregoing order was served upon each attorney or party of record herein by electronic means or first class U.S. mail on December 16, 2014.

s/Susan Pinkowski  
SUSAN PINKOWSKI